REMARKS

In at least some of Applicants' disclosed embodiments, prior to actual detection (measurement) of the light intensity at a given pixel, the involved sensor circuit is initialized by discharging the junction capacitance C of a photodiode PD. Once so initialized, the junction capacitance C can be recharged in a predictable manner that is dependent only on subsequently received light and on the known response characteristics of the device. Thus, once a predetermined time has elapsed following the initialization, the output voltage Vpd (a terminal voltage of the photodiode PD) will be accurately proportional to the quantity of light falling on the sensor. In particular, after any junction capacitance has been fully discharged, the device will operate with normal output characteristics of the photodiode, in which the photodiode output follows with a specified time constant any changes in quantity of incident light Ls, free of any afterglow effects from previously detected light. Then, after a certain period of time has elapsed consistent with the photodiode's time constant, no more current will be required to recharge capacitance C, the current supplied through a transistor Q1 and the current flowing in the photodiode PD will become equal to each other, and the output voltage Vpd will be representative of the light falling on the sensor subsequent to the initialization. Since there is never any charge remaining from the previous detection cycle, no afterglow of pixels can occur and the same normal output characteristic is always obtained.

Accordingly, a salient distinguishing feature of amended claim 2 is that the pixel signal from each of the pixels is detected at a specified moment of time after initialization of the corresponding sensor circuit representing that pixel.

In certain disclosed embodiments, each of sensor circuits in a particular pixel line is initialized at the same time T2 within the same pause T4 of the connected pixel line selecting circuit in which the pixel line selecting signal LSX assumes a low level corresponding to an inactive state during which none of the pixels on that particular line are currently selected. For example, when the level of the pixel line selecting signal LS1 drops to a low level L (during the pause T4 at the end of a first cycle T3, a drain

voltage VD1 for pixels D11, D12, D13 and D14 in the first pixel line is changed from a high level H to a low level L for a specified period of time T2 to initialize each of the sensor circuits (pixels) to make preparation for reading pixel signals at the beginning of the next cycle..

Accordingly, a salient distinguishing feature of claim 3 is that for each pixel line, initialization of all the respective sensor circuits is conducted simultaneously during a "pause" state of the respective pixel line selecting circuit in which the respective pixel line selecting signal is at a low level signifying that that particular line is not currently selected.

The cited references fail to disclose or suggest the above-described features of independent claims 2 and 3, and the claims 4 and 5 are both dependent from those independent claims. Accordingly, all pending claims are believed to be patentable, and early allowance of this application is earnestly solicited.

The Director is authorized to charge any additional fee(s) or any underpayment of fee(s), or to credit any overpayments to Deposit Account **50-0337**. Please ensure that Attorney Docket No. 7272-112/10302902 is referred to when charging any payments or credits for this case.

Respectfully submitted,

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